JS 1/19/21
RJA 2/16/22

INITIAL REVIEW ENGINEERING REPORT [redacted]
PMN: 18-0107

Post-Focus Draft Revision 2 11/6/2018
ENGINEER: El-Zoobi \ MLS / LMK / AFD / JAS
PV (kg/yr): [redacted]
Revision Notes / Assessment Overview: =====> [redacted]

SUBMITTER: Lanxess Corporation

USE: Hydrolysis stabilizer for polyester and polyamide plastics, mainly poly(lactic acid). The carbodiimide groups react with any terminal acid groups on the polymer chains, acting to decrease further hydrolysis and increase plastic durability. Carbodiimide FGEW = 315, based on charge.

OTHER USES: [redacted]

MSDS: Yes Label: No

Gen Eqpt: Good general ventilation should be sufficient to control worker exposure to airborne contaminants. // Wear suitable protective footwear. Wear suitable protective clothing and gloves // Safety glasses with side shields

Respirator: The type of respiratory protection selected must comply with the requirements set forth in OSHAs Respiratory Protection Standard (29 CFR 1910.134). Whenever vapor or mist of isocyanate is present it is mandatory to use a full-face positive pressure, supplied-air respirator or a self-contained breathing apparatus (SCBA) if the recommended exposure limit is exceeded or the airborne concentrations are not known.

Health Effects: No known significant effects or critical hazards.
TLV/PEL:

CRSS :
Chemical Name: [redacted]
S-H20: 1E-06 g/L @
VP: 1.0E-6 torr @
MW: [redacted] %<500 [redacted] %<1000
Physical State and Misc CRSS Info:
Neat: Solid Mfg: NK: Imported Proc/Form: Solid Blend: [redacted] % PMN substance in polyester plastic End Use: Solid: PMN substance entrained in plastic, or Destroyed. [redacted] MW NAVG = [redacted] with [redacted] < 500 and [redacted] < 1000, by GPC. Submitted Data: Yellow solid; MP = 60-90°C (Exp.); insoluble in water (MSDS); soluble in gasoline, benzene, carbon tetrachloride, trichloroethylene, methylene chloride; poorly soluble in acetone; nearly insoluble in ethanol; carbodiimide content > 11.5%; flash pt. = 310°C; auto-ignition temp. > 455°C; density = 1.05 g/cm3. A FTIR spectrum shows a [redacted] Cont'd on p.6.

Consumer Use: No
SAT (concerns) (02/13/2018):
Related Cases and Misc SAT Info:
Analogs: [redacted]
Migration to groundwater: Negligible
PBT rating: P3B1T2
Health: 2 Dermal, Drinking Water, Inhalation
Eco: 1 No releases to water

OCCUPATIONAL EXPOSURE RATING: [redacted]

NOTES & KEY ASSUMPTIONS:
Occupational exposure and environmental releases were estimated using the 9/30/2013 version of ChemSTEER tool. Input to ChemSTEER tool includes information from: the PMN submission, physical / chemical properties, relevant past cases, and the 2014 Plastics compounding GS and Plastics Converting GS. SAT concerns are for dermal, drinking water, and inhalation exposures. No releases to water. Negligible migration to groundwater. The following similar-use [redacted] PMN is import only; therefore, a manufacturing operation was not assessed. // Processing: The 2014 [redacted] GS was referenced to generate release and exposure estimates (consistent with all past cases). // Use: The 2014 [redacted] GS was referenced to generate release and exposure estimates (consistent with all past cases).

POLLUTION PREVENTION CONSIDERATIONS:
P2 Claims: The addition of Stabaxol P 110 into the compound allows the use of a bio-based plastic - PLA (polylactic acid) - to be used for a durable goods application. PLA is a plastic derived from the fermentation of corn and is being used in this application to replace PVC (polyvinyl chloride), a petroleum-based plastic that can be corrosive to metals surfaces and is toxic upon ignition. PLA without stabilization is used to make PLA cutlery, PLA cups and PLA hotel room cards, all considered nondurable. The addition of Stabaxol P110 to PLA will increase the life expectancy of the PLA to be comparable to PVC, considered a durable good. See also attached information in Process Description. When production begins, there are plans to recycle the Waste and Scrap of compounded pellets (Station IV on the process diagram) back into the extrusion process.

EXPOSURE-BASED REVIEW: No

INITIAL REVIEW ENGINEERING REPORT [redacted]

PMN: 18-0107

Processing: [redacted]

Number of Sites/ Location: [redacted]

[redacted]

Days/yr: 250

Basis: Submission specifies that process is continuous at [redacted] Submission estimates that PMN is used at a rate of 10 to 20 pounds per hour (109 - 218 kg PMN/day), [redacted] hours per day. PMN is compounded from [redacted] to [redacted] in resin. RAD assumes [redacted] days (due to exposure concerns) and CS calculates use rate of 200 kg PMN/day (which falls within the tange provided by the submitter).

Process Description: [redacted]

ENVIRONMENTAL RELEASES ESTIMATE SUMMARY

=====> Rev. 2: The assessment of releases of dust from Blending / Compounding was deleted in accordance with the submitter's claim that pellitizing does not generate dust (see contact report.) RAD believes this claim is reasonable because dust does not appear to be generated in a youtube video of pellitization. =====> FOCUS Ready draft: IRER Note: The daily releases listed for any source below may coincide with daily releases from the other sources to the same medium.// Submission does not provide release estimates; therefore, RAD asseses releases per the 2014 GS on [redacted] The 2014 GS on [redacted] indicates dust generation is not expected during loading compounded pellets.

Water or Air or Incineration or Landfill
[redacted] capt, [redacted] control: 3.4E-1 kg/site-day over [redacted] days/yr from [redacted]

or [redacted] kg/site-yr from [redacted] or [redacted] kg/yr-all sites
to: [redacted] incineration and landfill (captured and controlled); [redacted] air (captured and uncontrolled); [redacted] water, air, incineration, or landfill (uncaptured).

from: Unloading Solid Raw Material from Transport Containers [redacted] capture, [redacted] control)

basis: =====> Rev. 2: The release assessment was revised to account for the Hapman Dust Collector that is utilized at the site according to the submitter (see contact report.) Releases were assessed in accordance with EPA's Solids Transfer Dust Release Model dated 9.7.18. Specifically, this release is assessed based on the low capture efficiency mentioned in the model for a "combined dust capture and control technology" because the actual capture efficiencies for the Hapman Dust Collector are unknown. These efficiencies are [redacted] respectively. The EPA/OPPT Solids Transfer Dust Loss Model estimates that a maximum of [redacted] dust is released from transfer operations. Partitioning media of release using the capture and control efficiencies, RAD estimates the following: (1) Captured and controlled: [redacted] captured x [redacted] controlled) = [redacted] to incineration and landfill; (2) Captured and uncontrolled: [redacted] captured x [redacted] uncontrolled = [redacted] to air; (3) Uncaptured: ([redacted] [redacted] captured) = [redacted] to water, air, incineration, or landfill. /// Note that ChemSTEER does not allow media of release percentages <[redacted]; therefore RAD assessed [redacted] incineration and landfill (captured and controlled); [redacted] air (captured and uncontrolled); and [redacted] water, air, incineration, or landfill (uncaptured). =====> FOCUS Ready draft: EPA/OPPT Solids Transfer Dust Loss Model. No dust controls are assumed as a worst case. Submission indicates PMN is contained in plastic pellets when imported to minimize dusting. The 2014 GS for [redacted] states dust may be created during transport due to wearing of pellets. Therefore, RAD assesses dust release using dust model as conservative. RAD assesses release per dust model to Air, Water, Incineration, or Landfill per the GS.

Water or Air or Incineration or Landfill
[redacted] capt, [redacted] control: 2.5E-2 kg/site-day over [redacted] days/yr from [redacted]

or [redacted] kg/site-yr from [redacted] or [redacted] kg/yr-all sites
to: [redacted] incineration and landfill (captured and controlled); [redacted] air (captured and uncontrolled); [redacted] water, air, incineration, or landfill (uncaptured)

from: Unloading Solid Raw Material from Transport Containers ([redacted] capture, [redacted] control)

basis: =====> Rev. 2: The release assessment was revised to account for the Hapman Dust Collector that is utilized at the site according to the submitter (see contact report.) Releases were assessed in accordance with EPA's Solids Transfer Dust Release Model dated 9.7.18. Specifically, this release is assessed based on the low capture efficiency mentioned in the model for a "combined dust capture and control technology" because the actual capture efficiencies for the Hapman Dust Collector are unknown. These efficiencies are [redacted] respectively. The EPA/OPPT Solids Transfer Dust Loss Model estimates that a maximum of [redacted] dust is released from transfer operations. Partitioning media of release using the capture and control efficiencies, RAD estimates the following: (1) Captured and controlled: [redacted] captured x [redacted] controlled) = [redacted] to incineration and landfill; (2) Captured and uncontrolled: [redacted] captured x [redacted] uncontrolled = [redacted] to air; (3) Uncaptured: ([redacted] [redacted] captured) = 5% to water, air, incineration, or landfill. =====> FOCUS Ready draft: EPA/OPPT Solids Transfer Dust Loss Model. No dust controls are assumed as a worst case. Submission indicates PMN is contained in plastic pellets when imported to minimize dusting. The 2014 GS for plastic converting states dust may be created during transport due to wearing of pellets. Therefore, RAD assesses dust release using dust model as conservative. RAD assesses release per dust model to Air, Water, Incineration, or Landfill per the GS.

Air
[redacted] [redacted]control: 5.0E-5 kg/site-day over [redacted]days/yr from [redacted]

or [redacted] kg/site-yr from [redacted]or [redacted] kg/yr-all sites
to: [redacted] incineration and landfill (captured and controlled); [redacted] air (captured and uncontrolled); [redacted] water, air, incineration, or landfill (uncaptured).

from: Unloading Solid Raw Material from Transport Containers ([redacted] capture, [redacted] control)

basis: =====> Rev. 2: The release assessment was revised to account for the Hapman Dust Collector that is utilized at the site according to the submitter (see contact report.) Releases were assessed in accordance with EPA's Solids Transfer Dust Release Model dated 9.7.18. Specifically, this release is assessed based on the low capture efficiency mentioned in the model for a "combined dust capture and control technology" because the actual capture efficiencies for the Hapman Dust Collector are unknown. These efficiencies are [redacted] respectively. The EPA/OPPT Solids Transfer Dust Loss Model estimates that a maximum of [redacted] dust is released from transfer operations. Partitioning media of release using the capture and control efficiencies, RAD estimates the following: (1) Captured and controlled: [redacted] captured x [redacted] controlled) = [redacted] to incineration and landfill; (2) Captured and uncontrolled: [redacted] captured x [redacted] uncontrolled = [redacted] to air; (3) Uncaptured: [redacted] [redacted] captured) =[redacted] to water, air, incineration, or landfill. /// Note that ChemSTEER does not allow media of release percentages <[redacted]; therefore RAD assessed [redacted] incineration and landfill (captured and controlled); [redacted]air (captured and uncontrolled); [redacted]water, air, incineration, or landfill (uncaptured). =====> FOCUS Ready draft: EPA/OPPT Solids Transfer Dust Loss Model. No dust controls are assumed as a worst case. Submission indicates PMN is contained in [redacted] when imported to minimize dusting. The 2014 GS for [redacted] states dust may be created during transport due to wearing of [redacted]. Therefore, RAD assesses dust release using dust model as conservative. RAD assesses release per dust model to Air, Water, Incineration, or Landfill per the GS.

Air
[redacted]capt, [redacted] control: 5.0E-5 kg/site-day over [redacted] days/yr from [redacted]

or [redacted]kg/site-yr from [redacted] or [redacted] kg/yr-all sites
to: [redacted] incineration and landfill (captured and controlled); [redacted] air (captured and uncontrolled); [redacted] water, air, incineration, or landfill (uncaptured)

from: Unloading Solid Raw Material from Transport Containers [redacted] capture, [redacted] control)

basis: =====> Rev. 2: The release assessment was revised to account for the Hapman Dust Collector that is utilized at the site according to the submitter (see contact report.) Releases were assessed in accordance with EPA's Solids Transfer Dust Release Model dated 9.7.18. Specifically, this release is assessed based on the low capture efficiency mentioned in the model for a "combined dust capture and control technology" because the actual capture efficiencies for the Hapman Dust Collector are unknown. These efficiencies are [redacted] respectively. The EPA/OPPT Solids Transfer Dust Loss Model estimates that a maximum of [redacted] dust is released from transfer operations. Partitioning media of release using the capture and control efficiencies, RAD estimates the following: (1) Captured and controlled: [redacted] captured x [redacted] controlled) = [redacted] to incineration and landfill; (2) Captured and uncontrolled: [redacted]captured x [redacted] uncontrolled = [redacted] to air; (3) Uncaptured: ([redacted] [redacted] captured) = 5% to water, air, incineration, or landfill. =====> FOCUS Ready draft: EPA/OPPT Solids Transfer Dust Loss Model. No dust controls are assumed as a worst case. Submission indicates PMN is contained in plastic pellets when imported to minimize dusting. The 2014 GS for plastic converting states dust may be created during transport due to wearing of [redacted]. Therefore, RAD assesses dust release using dust model as conservative. RAD assesses release per dust model to Air, Water, Incineration, or Landfill per the GS.

Incineration or Landfill
[redacted]control: 1.6E-1 kg/site-day over [redacted] days/yr from [redacted]

or [redacted] kg/site-yr from [redacted]or [redacted] kg/yr-all sites
to: [redacted] incineration and landfill (captured and controlled);[redacted] air (captured and uncontrolled); [redacted] water, air, incineration, or landfill (uncaptured).

from: Unloading Solid Raw Material from Transport Containers [redacted] capture, [redacted] control)

basis: =====> Rev. 2: The release assessment was revised to account for the Hapman Dust Collector that is utilized at the site according to the submitter (see contact report.) Releases were assessed in accordance with EPA's Solids Transfer Dust Release Model dated 9.7.18. Specifically, this release is assessed based on the low capture efficiency mentioned in the model for a "combined dust capture and control technology" because the actual capture efficiencies for the Hapman Dust Collector are unknown. These efficiencies are [redacted] respectively. The EPA/OPPT Solids Transfer Dust Loss Model estimates that a maximum of [redacted] dust is released from transfer operations. Partitioning media of release using the capture and control efficiencies, RAD estimates the following: (1) Captured and controlled: [redacted] captured x [redacted] controlled) = [redacted] to incineration and landfill; (2) Captured and uncontrolled: [redacted] captured x [redacted] uncontrolled = [redacted] to air; (3) Uncaptured: ([redacted] [redacted] captured) = [redacted] to water, air, incineration, or landfill. /// Note that ChemSTEER does not allow media of release percentages <0.01; therefore RAD assessed [redacted] incineration and landfill (captured and controlled); [redacted] air (captured and uncontrolled); and [redacted] water, air, incineration, or landfill (uncaptured). =====> FOCUS Ready draft: EPA/OPPT Solids Transfer Dust Loss Model. No dust controls are assumed as a worst case. Submission indicates PMN is contained in [redacted] when imported to minimize dusting. The 2014 GS for plastic converting states dust may be created during transport due to wearing of [redacted]. Therefore, RAD assesses dust release using dust model as conservative. RAD assesses release per dust model to Air, Water, Incineration, or Landfill per the GS.

Incineration or Landfill
Output 2: 2.0E+0 kg/site-day over [redacted] days/yr from [redacted]
or [redacted] kg/site-yr from [redacted] or [redacted] kg/yr-all sites
to: Incineration or landfill (submission/engineering judgement)
from: Equipment Cleaning Losses of Solids from Process Vessels
basis: EPA/OPPT Solid Residuals in Transport Containers Model, CEB standard 1% residual. Submission states equipment will be cleaned only when a different product will need to use the same system. This is estimated to be about [redacted] times per year in the beginning but the goal is for this product to be continuous so that it will never need to be cleaned. Cleaning the blender involves dry mopping and air wand cleaning (i.e. using compressed air). No liquid is used. This is only done at the end of a campaign." RAD assesses release with standard model, per the GS, over [redacted] days/yr (per the submission due to known site and continuous nature of the operation), to landfill or incineration (consistent with dry cleaning).

Incineration or Landfill

[redacted] control: 4.7E-1 kg/site-day over [redacted] days/yr from [redacted]

or [redacted] kg/site-yr from [redacted] or [redacted] kg/yr-all sites
to: [redacted] incineration and landfill (captured and controlled); [redacted] air (captured and uncontrolled); [redacted] water, air, incineration, or landfill (uncaptured)

from: Unloading Solid Raw Material from Transport Containers [redacted] capture, [redacted] control)

basis: =====> Rev. 2: The release assessment was revised to account for the Hapman Dust Collector that is utilized at the site according to the submitter (see contact report.) Releases were assessed in accordance with EPA's Solids Transfer Dust Release Model dated 9.7.18. Specifically, this release is assessed based on the low capture efficiency mentioned in the model for a "combined dust capture and control technology" because the actual capture efficiencies for the Hapman Dust Collector are unknown. These efficiencies are [redacted] respectively. The EPA/OPPT Solids Transfer Dust Loss Model estimates that a maximum of [redacted] dust is released from transfer operations. Partitioning media of release using the capture and control efficiencies, RAD estimates the following: (1) Captured and controlled: [redacted] captured x [redacted] controlled) = [redacted] to incineration and landfill; (2) Captured and uncontrolled: [redacted] captured x [redacted] uncontrolled = [redacted] to air; (3) Uncaptured: ([redacted] [redacted] captured) = 5% to water, air, incineration, or landfill. =====> FOCUS Ready draft: EPA/OPPT Solids Transfer Dust Loss Model. No dust controls are assumed as a worst case. Submission indicates PMN is contained in [redacted] when imported to minimize dusting. The 2014 GS for plastic converting states dust may be created during transport due to wearing of [redacted]. Therefore, RAD assesses dust release using dust model as conservative. RAD assesses release per dust model to Air, Water, Incineration, or Landfill per the GS.

Landfill
Output 2: 2.0E+0 kg/site-day over [redacted] days/yr from [redacted]
or [redacted] kg/site-yr from [redacted] or 5.0E+2 kg/yr-all sites
to: Landfill (submission)

from: Cleaning Solid/ Powder Residuals from Containers Used to Transport the Raw Material

basis: EPA/OPPT Solid Residuals in Transport Containers Model, CEB standard 1% residual. Submission indicates PMN is contained in plastic pellets when imported to minimize dusting. The 2014 GS for [redacted] states dust may be created during transport due to wearing of [redacted]. Submission indicates [redacted] Therefore, RAD assesses container residue release using standard model as conservative. RAD assesses to landfill, per submission.

RELEASE TOTAL
[redacted] kg/yr - all sites

OCCUPATIONAL EXPOSURES ESTIMATE SUMMARY
Tot. # of workers exposed via assessed routes: [redacted]
Basis:

Inhalation:

Exposure to Particulate (non-volatile) (Class I)
OSHA PNOR PEL:
> Potential Dose Rate: 1.1E+2 mg/day over [redacted] days/yr
> Lifetime Average Daily Dose: 4.9E-1 mg/kg-day over [redacted] days/yr
> Average Daily Dose: 9.9E-1 mg/day over [redacted] days/yr
> Acute Potential Dose: 1.4E+0 mg/day over [redacted] days/yr
Number of workers (all sites) with inhalation exposure: [redacted]
Basis: Unloading Solid Raw Material from Transport Containers ([redacted] capture, [redacted] control); OSHA PNOR-PEL Model. Per June 2016 Interim Guidance on Effectiveness of Inhalation Exposures, assume 25% effectiveness if no other information is provided. Concentration: Cm = 15 x (1-0.25) = 11.25 mg/m3; exposure duration: h = [redacted] hr/day // Per November 2016 RAD guidance, the following default parameters for this model were updated: body weight (BW) was updated from 70 to 80 kg and Averaging Time over a Lifetime (ATc) was updated from 70 to 78 years. Because of a ChemSTEER bug, these numbers were reversed to allow for calculation (BW = 78 kg and ATc = 80 years).

NOTE: The respirator class is: I. Particulate (including solid or liquid droplets).

INHALATION MONITORING DATA REVIEW

1)	Uncertainty (estimate based on model, regulatory limit, or data not specific to industry):	Yes
2)a)	Exposure level > 1 mg/day?	Yes
	OR	
b)	Hazard Rating for health of 2 or greater? 2	Yes

=> Inhalation Monitoring Data Desired? **No**

Dermal:

Exposure to Solid at 100.00% concentration
High End:
> Potential Dose Rate: 3.1E+3 mg/day over [redacted] days/yr
> Lifetime Average Daily Dose: 1.4E+1 mg/day over [redacted] days/yr
> Average Daily Dose: 2.7E+1 mg/day over [redacted]days/yr
> Acute Potential Dose: 3.9E+1 mg/day over [redacted] days/yr
Number of workers (all sites) with dermal exposure: [redacted]
Basis: Unloading Solid Raw Material from Transport Containers ([redacted] capture, [redacted] control); EPA/OPPT Direct 2-Hand Dermal Contact with Solids Model. Per November 2016 RAD guidance, default parameters for this model were updated: body weight (BW) was updated from 70 to 80 kg and Averaging Time over a Lifetime (ATc) was updated from 70 to 78 years.

INITIAL REVIEW ENGINEERING REPORT [redacted]

PMN: 18-0107

Use: Plastic Converting

Number of Sites/ Location: [redacted]

unknown site(s)

Days/yr: 254

Basis: Revision notes: Submission indicates 1 site. Mass balance parameters updated to reflect 1 ste. RAD assumes 254 batches/year, 2% PMN. CS calculates 196.85 kg PMN/batch. // Original Basis Text: Submission does not provide USE information. The 2014 Plastics Converting GS recommends using 254 days/yr (for exposure concerns). The submission indicates concentration of PMN in the resin is [redacted]. Per GS, typical concentration for all solid additives in the resin is 9[redacted] (Fig 3-1). Therefore, the average yearly use rate calculated by the GS is: [redacted] kg all additives/site-year x [redacted] kg PMN/kg resin / [redacted] kg all additives/kg resin = [redacted] kg PMN/site-year. Number of sites = [redacted] kg PMN/yr / [redacted] kg/site-year = [redacted] sites, rounded to [redacted] sites. CS calculates [redacted] kg PMN/site-day.

Process Description: [redacted]

ENVIRONMENTAL RELEASES ESTIMATE SUMMARY

=====> Rev. 2: (a) the assessments of releases due to the generation of dust during unloading of pellets was deleted because the pellets will be moved a short distrance within the site before unloading and generation of fines due to degradation during transportation is unlikely (see contact report) (b) the assessments of releases due to the generation of dust during converting was deleted becasue a hot knife is used to cut the produced articles and this equipment is not expected to generate dust (see contact report.) =====> FOCUS Ready Draft: IRER Note: The daily releases listed for any source below may coincide with daily releases from the other sources to the same medium.

Water or Incineration or Landfill
Conservative: 2.0E+0 kg/site-day over [redacted] days/yr from [redacted]
or [redacted] kg/site-yr from [redacted] or [redacted] kg/yr-all sites
to: Water, incineration or landfill (GS)
from: Equipment Cleaning Losses of Liquids from a Single, Large Vessel

basis: EPA/OPPT Single Vessel Residual Model, CEB standard 1% residual. The GS recommends using the Single Vessel Residual Model for equipment cleaning and assesses release to water, incineration or landfill.

Incineration or Landfill
Output 2: 2.0E+0 kg/site-day over [redacted] days/yr from [redacted]
or [redacted] kg/site-yr from [redacted] or [redacted] kg/yr-all sites
to: Incineration or landfill (GS)
from: Cleaning Solid/ Powder Residuals from Containers Used to Transport the Raw Material

basis: EPA/OPPT Solid Residuals in Transport Containers Model, CEB standard 1% residual. Submission states the compounded plastic containing the PMN is transported in pellet form. GS states dust residual may be created due to wearing of [redacted] during transportation and recommends estimating container cleaning residuals based on the generation of solid particulates. RAD assesses container cleaning release to incineration or landfill per GS.

Incineration or Landfill
Output 2: 4.9E+0 kg/site-day over [redacted]days/yr from [redacted]
or [redacted] kg/site-yr from [redacted]or [redacted]kg/yr-all sites
to: Incineration or landfill (GS)
from: Trimming Operations
basis: User-Defined Loss Rate Model. The GS estimates 2.5% loss from trimming and grinding operations used to form final plastic article. GS estimates release to incineration or landfill.

RELEASE TOTAL
[redacted] kg/yr - all sites

OCCUPATIONAL EXPOSURES ESTIMATE SUMMARY
Tot. # of workers exposed via assessed routes: 0
Basis:

Inhalation:

Rev. (2): (a) the assessments of inhalation exposure to dust due to the generation of dust during unloading of pellets was deleted because the pellets will be moved a short distrance within the site before unloading and generation of fines due to degradation during transportation is unlikely (see contact report)

Dermal:

GS indicates additives are entrained in plastic pellets and are tightly bound to the polymer matrix and are not likely to leach out of the plastic during converting operations. Therefore, dermal exposures are expected to be negligible. Additionally, the GS indicates dermal exposure will not occuring during converting process due to the high temperatures at which these processes occur.

[redacted]

MEMORANDUM of CBI TELEPHONE CONVERSATION

CALL BY: M. El-Zoobi, H. Malagon
Organization: EPA

CALL TO: Deborah Vercek

Organization: Lanxess

Date: 07/23/2018

Time: 9

Phone:

Concerning what TSCA CBI?

PMN: 18-0107

Q1: what is the particle size distribution of imported material?| A1: we will test a sample taken from a batch that was imported for particle size distribution. We will confirm in writing that this batch was imported under normal conditions, and we will desribe the test method and the rationale for this test method (i.e., why other test methods are not appropirate.)| | Q2: was the imported material that you will sample transported to the customer site or only to your warehous?| A2: only to our warehouse but we will transport it to the customer site and sample it there.| | Q3: At the processing site, what is the capture efficiency of the engineering controls? Where is the filter dischare vented to? indoor air or ambient air? What PPE is used to avoid exposure during filter removal?| A3: we will provide this information| | Q3: describe the use process| A3: This material is an additive to bio-sourced plastic material from which windows are made that are a replacement for PVC windows. The compounded material are unloaded into a hopper, melted in a screw extruder [redacted] pressured into a profile die to take the shape of a window frame, and then pulled thru a water or air cooling area and then cut-off by a saw. This porcess will not result in any dust generation.| | Q4: Are there any engineering controls at the saw?| A4: We will find out. Also, we may conduct an experiment to determine whether there will be any attrition of [redacted] [redacted] due loading and then unloading at the processing and use site, respectively, which are one and the same.

[redacted]

MEMORANDUM of CBI TELEPHONE CONVERSATION

CALL BY: M. El-Zoobi,

Organization: EPA

CALL TO: Steve Grant

Organization: HAPMAN

Date: 08/28/2018

Time:

Phone: 269-382-8223

Concerning what TSCA CBI?

PMN: 18-0107

Q1: what is the dust control efficiency?| A1: Most dust would be controlled but we have not tested this. Dust control would depend on the position of the operator. I will send you velocity measurements.| | Q2: Do you have any basis for believing that most dust is controlled?| A2: No| | Q3: | A3: | | Q4: | A4:

[redacted]

MEMORANDUM of CBI TELEPHONE CONVERSATION

CALL BY: M. El-Zoobi, H. Malagon

Organization: EPA

CALL TO: Deborah Vercek

Organization: Lanxess

Date: 08/28/2018

Time:

Phone:

Concerning what TSCA CBI?

PMN: 18-0107

Q1: You provided the capture efficiency but not the control efficiency; can you provide the later?| A1: Please explain what you mean by control efficiency and I will send you request to the buisness unit in Germany.| | Q2: | A2: | | Q3: | A3: | | Q4: | A4:

[redacted]

MEMORANDUM of CBI TELEPHONE CONVERSATION

CALL BY: M. El-Zoobi,

Organization: EPA

CALL TO: Craig Thomas

Organization: Hapman

Date: 08/28/2018

Time:

Phone:

Concerning what TSCA CBI?

PMN: 18-0107

C. Thomas responded to my questions via Admin email about the dust collector that the company he works for manufactures.